South Coast Air Quality Management District
Monitoring and Analysis

Air Quality Sampling in the Vicinity of an Excavation Site in the City of Calabasas.

Sampling Conducted 12/14/99 – 1/1/00

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February 2000

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Introduction
From December 14, 1999 to January 1, 2000, the South Coast Air Quality Management District (SCAQMD) conducted an air quality sampling study in the vicinity of an excavation site in the City of Calabasas. The purpose of this study was to determine if the excavation site was a source of particulate air pollutants.

Equipment Location, Description and Methodology
The SCAQMD located samplers at three sites. Two of the sites were located downwind of the excavation; these are the McNeil residence (site 1) and the Lupin Hills School (site 2). A sampler located at DeAnza Park (site 3) provided upwind data. A map of the area with the excavation and sampler sites indicated is included as Figure 1. It is apparent that there is an unusually large distance between the upwind and downwind sites. The choice of DeAnza Park for the upwind site was influenced by a need for accessibility, security, and a power source.

The samplers selected particles with aerodynamic diameter of 10 μm or less (PM10). The PM10 were collected on preconditioned and weighed quartz filters over a period of 24 hours. The filters were reconditioned and weighed after sample collection. The concentrations of PM10 at each site were calculated from the weighing, air flow, and total operating time data. The values are summarized in Table 1 and the data sheets included in Appendix 1.

Discussion
The PM10 concentration data do not show any significant increase in PM10 at either of the downwind sites (1 and 2) compared to the upwind site (3). If the excavation site was a source of airborne particulate pollutants the PM10 concentration at the downwind sites would be higher than the upwind site. The only increase greater than a few $\mu g/m^3$ occurs on December 22, 1999 at site 1. The concentration difference between site 2 and site 3 is 22 $\mu g/m^3$ on this day. However, an increase of 50 $\mu g/m^3$ or greater, as in Rule 403 for fugitive dust entrainment, would be required for there to be a finding that the excavation site is creating a nuisance.

Data from December 26, 1999 and January 1, 2000 represent PM10 concentrations at sites 1 and 2 in the absence of any excavation work. The average PM10 measurements for sites 1, 2, and 3 on the four workdays were 26, 16, and 21 $\mu g/m^3$, respectively. The values for the two holidays were 12, 10, 16 and 21, 23, 20 $\mu g/m^3$. It is apparent that the difference between the PM10 concentration at a site on workdays and holidays is of similar magnitude to the range of values observed at the same site between the two holidays. Similarly, the difference between downwind and upwind sites is comparable to variation in the concentration at any site between the two holidays. In short, while the PM10 data do show small differences, these are not considered to be significant when compared with the general variability in the measurements that occurs even in the absence of any excavation.

A further possible factor to consider is rainfall, which can reduce measured PM10 values. However, there was very little rainfall during the sampling period. The closest station to

Calabasas, at Pierce College, Canoga Park, recorded 0.01" of rain during the 24 hours preceding 4pm on January 1, 2000.

Additional comparative data are available from the Burbank and Newhall stations; these two are the closest permanent SCAQMD monitoring stations to Calabasas. Four of the days on which sampling occurred at Calabasas coincide with scheduled measurements from Burbank and Newhall. The average of the PM10 concentration at Newhall was 24.0 $\mu g/m^3$ compared to 20.5, 16.3, and 19.5 $\mu g/m^3$ for sites 1, 2, and 3 in Calabasas on the same four days. The data from both the upwind and downwind Calabasas sites are similar to the Newhall data. By comparison the excavation site does not appear to contribute any significant amount to PM10 during the monitoring. The corresponding data from Burbank have an average value of 48.8 $\mu g/m^3$ and generally are higher than from the Calabasas sites. In this case, there is a greater ambient PM10 concentration than associated with the excavation site in Calabasas.

No exceedances of either the federal or state ambient air quality standards for PM10 were observed for any of the samples in Calabasas.

Conclusion

Based on a limited sampling set of six days, there are no indications of significant particulate (PM10) air quality influences in Calabasas as a result of the excavation site.

	12/14/99	*12/16/99*	*12/20/99*	*12/22/99*	*12/26/99*	*1/1/00*
Site 1	22	15	27	39	12	21
Site 2	21	16	11	16	10	23
Site 3	23	26	19	17	16	20
Burbank	64	no data	63	no data	33	35
Newhall	25	no data	21	no data	23	27

Table 1: PM10 concentrations measured in $\mu g/m^3$ on selected days for samplers located in Burbank, Newhall, and three sites in the City of Calabasas.

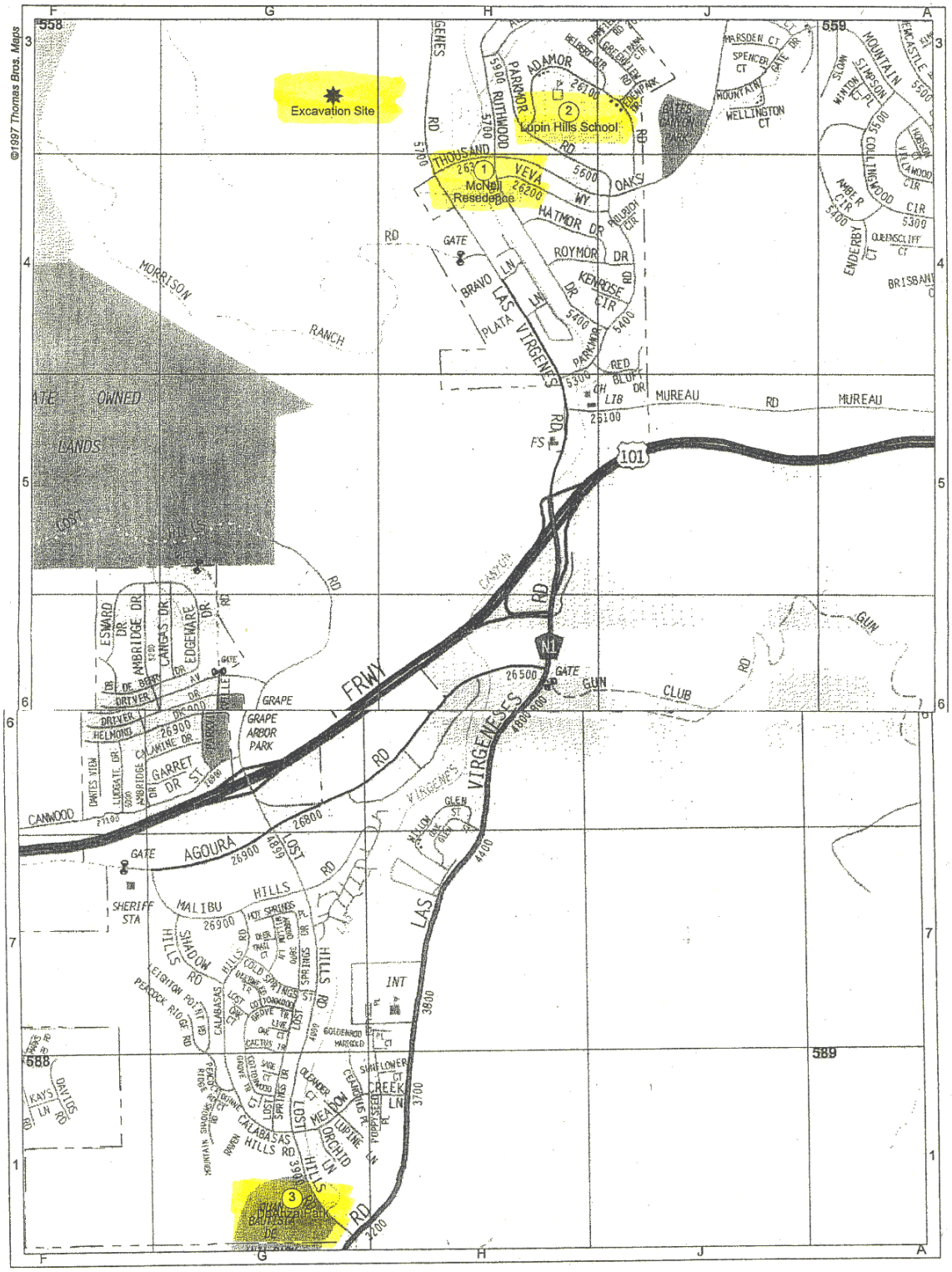

Figure 1: Map of the area around the excavation site in Calabasas indicating the downwind (1 and 2) and upwind (3) sampler sites.

Appendix 1

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Dr., Diamond Bar, CA 91765-4182

MONITORING AND ANALYSIS
REPORT OF LABORATORY ANALYSIS

TO: Lab Files

LABORATORY NO. 9350901

REFERENCE NO. QF-8-73, -74

DATE RECEIVED: 12-16-99

REQUESTED BY: Sumner Wilson

SAMPLE DESCRIBED AS:

Three quartz filters
Run #: 1
Run date: 12/14/99

SAMPLE SOURCE: Calabasas

Particulate Mass by Gravimetric Measurement.

Site No.	Filter No.	Mass, $\mu g/M^3$
1	Q9001370	22
2	Q9001381	21
3	Q9001361	23

Date Approved: 1/6/00

Approved By:

Rudy Eden, Sr. Manager
Laboratory Services

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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MONITORING AND ANALYSIS
REPORT OF LABORATORY ANALYSIS

TO: Lab Files

LABORATORY NO. 9356901

REFERENCE NO. QF-8-73

DATE RECEIVED: 12-22-99

REQUESTED BY: Sumner Wilson

SAMPLE DESCRIBED AS:

Three quartz filters
Run #: 2
Run date: 12/16/99

SAMPLE SOURCE: Calabasas

Particulate Mass by Gravimetric Measurement.

Site No.	Filter No.	Mass, µg/M³
1	Q9001363	15
2	Q9001362	16
3	Q9001364	26

Date Approved: 1/6/00

Approved By: Rudy Eden

Rudy Eden, Sr. Manager
Laboratory Services

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MONITORING AND ANALYSIS
REPORT OF LABORATORY ANALYSIS

TO: Lab Files

LABORATORY NO. 9356902

REFERENCE NO. QF-8-73

DATE RECEIVED: 12-22-99

REQUESTED BY: Sumner Wilson

SAMPLE DESCRIBED AS:

Three quartz filters
Run #: 3
Run date: 12/20/99

SAMPLE SOURCE: Calabasas

Particulate Mass by Gravimetric Measurement.

Site No.	Filter No.	Mass, $\mu g/M^3$
1	Q9001367	27
2	Q9001366	11
3	Q9001368	19

Date Approved: 1/6/00

Approved By: Rudy Eden

Rudy Eden, Sr. Manager
Laboratory Services

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MONITORING AND ANALYSIS
REPORT OF LABORATORY ANALYSIS

TO: Lab Files

LABORATORY NO. 9357906

REFERENCE NO. QF-8-68,-74

SAMPLE DESCRIBED AS:

Three quartz filters
Run #: 4
Run date: 12/22/99

DATE RECEIVED: 12-23-99

REQUESTED BY: Sumner Wilson

SAMPLE SOURCE: Calabasas

Particulate Mass by Gravimetric Measurement.

Site No.	Filter No.	Mass, $\mu g/M^3$
1	Q9001369	39
2	Q9001288	16
3	Q9001287	17

Date Approved: 1/6/00

Approved By: Rudy Eden

Rudy Eden, Sr. Manager
Laboratory Services

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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MONITORING AND ANALYSIS
REPORT OF LABORATORY ANALYSIS

TO: Lab Files

LABORATORY NO. 0004001

REFERENCE NO. QF-8-68

DATE RECEIVED: 1-04-00

REQUESTED BY: Sumner Wilson

SAMPLE DESCRIBED AS:

Three quartz filters
Run #: 5
Run date: 12/26/99

SAMPLE SOURCE: Calabasas

Particulate Mass by Gravimetric Measurement.

Site No.	Filter No.	Mass, µg/M^3
1	Q9001292	12
2	Q9001291	10
3	Q9001289	16

Date Approved: 1/11/00

Approved By: Rudy Eden

Rudy Eden, Sr. Manager
Laboratory Services

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MONITORING AND ANALYSIS
REPORT OF LABORATORY ANALYSIS

TO: Lab Files

LABORATORY NO. 0011002

REFERENCE NO. QF-8-51,-52,-68

SAMPLE DESCRIBED AS:

Three quartz filters
Run #: 6
Run date: 1/1/00

DATE RECEIVED: 1-11-00

REQUESTED BY: Sumner Wilson

SAMPLE SOURCE: Calabasas

Particulate Mass by Gravimetric Measurement.

Site No.	Filter No.	Mass, $\mu g/M^3$
1	Q9001071	21
2	Q9001295	23
3	Q9001072	20

Date Approved: 1/18/00

Approved By: Rudy Eden

Rudy Eden, Sr. Manager
Laboratory Services

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